Bruhat Bangalore Mahanagara Palike
Excecutive Engineer Project Division Yelahanka

Name of Work: Modified Estimate for Developments of roads and drains at Kogilu Layout Main and Cross Roads in Ward No.05 (Jakkur) Byatarayanapura Sub division

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Civil Work								
1	KSRRB 300-1. **Earthwork excavation by manual means for roads,** drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1,KPWD SR 2018-19) 8km lead= 57+2.0x1.28x8 =77.48								
	CC Drain								
	Kogilu Layout								
	Bande Road	1	663.40	1.10	1.00	729.74			
		1	384.90	1.10	1.00	423.39			
	9th Cross Road	2	93.25	1.10	1.00	205.15			
	Cross Road 01	1	26.00	1.00	1.00	26.00			
	Cross Road 02	2	22.30	1.00	1.00	44.60			
	Cross Road 03	2	22.20	1.00	1.00	44.40			
	Cross Road 04	2	18.60	1.00	1.00	37.20			
	Connecting Road	2	34.50	1.00	1.00	69.00			
	St Michaels School Backside Rd	2	95.80	1.00	1.00	191.60			
	12th Cross Krishnadevaraya Rd	2	192.70	1.10	1.00	423.94			
	10th Crss Major Sandeep Rd	2	202.00	1.10	1.00	444.40			
	Cross Road	1	228.20	1.00	1.00	228.20			
	Cross road 2	1	49.00	1.10	1.00	53.90			
	Culverts	14	4.80	1.50	1.00	100.80			
	Desilt								
	Matru Layout								
	1st Cross	2	389.80	0.52	0.50	202.70			
	2nd Cross	2	198.50	0.50	0.55	109.18			
	3rd Cross	2	249.40	0.52	0.50	129.69			
						3463.88	**Cum**	**225.93**	**782594.00**
2	KSRRB M2100-10. Providing and laying **Plain cement concrete of mix 1:3:6** with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18,KPWD SR 2018-19)								
	CC Drain								
	Bande Road	1	663.40	1.10	0.15	109.46			
		1	384.90	1.10	0.15	63.51			
	9th Cross Road	2	93.25	1.10	0.15	30.77			
	Cross Road 01	1	26.00	1.00	0.15	3.90			
	Cross Road 02	2	22.30	1.00	0.15	6.69			
	Cross Road 03	2	22.20	1.00	0.15	6.66			
	Cross Road 04	2	18.60	1.00	0.15	5.58			
	Connecting Road	2	34.50	1.00	0.15	10.35			
	St Michaels School Backside Rd	2	95.80	1.00	0.15	28.74			
	12th Cross Krishnadevaraya Rd	2	192.70	1.10	0.15	63.59			
	10th Crss Major Sandeep Rd	2	202.00	1.10	0.15	66.66			
	Cross Road	1	228.20	1.00	0.15	34.23			

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Cross road 2	1	49.00	1.00	0.15	7.35			
	Culverts	14	4.80	1.50	0.15	15.12			
						452.61	**Cum**	**5690.22**	**2575468.00**
3	KSRB 4-1.6 ; Providing and laying in **position plain cement concrete of Mix 1:2:4** with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregtes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. (P.No-13,I No-4.6,KPWD SR 2018-19)								
	For Below Kerb Stone								
	Kogilu Layout								
	Bande Road	1	663.40	0.20	0.10	13.27			
		1	384.90	0.20	0.10	7.70			
						20.97	**Cum**	**6031.75**	**126462.00**
4	KSRB 4.9.2 : Providing **T.M.T steel reinforcement** for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specificatio (I No-28.8.2,P No-229,KPWD SR 2018-19)								
	Consider 60Kg/Cum	1	840.69	60.00		50660.23			
	Consider 90Kg/Cum	1	35.55	90.00		3199.39			
						53859.62			
						53.86	**Tn**	**75906.30**	**4088284.00**
5	Providing and laying **plain/reinforced cement concrete** for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specificationsdo- Wall & bottom thickness 15cm (I No-37.59.2,P No-271,KPWD SR 2018-19)								
	CC Drain Raft								
	Kogilu Layout								
	Bande Road	1	663.40	0.90	0.15	89.56			
		1	384.90	0.90	0.15	51.96			
	9th Cross Road	2	93.25	0.90	0.15	25.18			
	Cross Road 01	1	26.00	0.80	0.15	3.12			
	Cross Road 02	2	22.30	0.80	0.15	5.35			
	Cross Road 03	2	22.20	0.80	0.15	5.33			
	Cross Road 04	2	18.60	0.80	0.15	4.46			
	Connecting Road	2	34.50	0.80	0.15	8.28			
	St Michaels School Backside Rd	2	95.80	0.80	0.15	22.99			
	12th Cross Krishnadevaraya Rd	2	192.70	0.90	0.15	52.03			
	10th Crss Major Sandeep Rd	2	202.00	0.90	0.15	54.54			
	Cross Road	1	228.20	0.80	0.15	27.38			
	Cross road 2	1	49.00	0.80	0.15	5.88			
	CC Drain Wall								
	Kogilu Layout								
	Bande Road	2	663.40	0.15	0.60	119.41			
		2	384.90	0.15	0.60	69.28			
	9th Cross Road	4	93.25	0.15	0.60	33.57			

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Cross Road 01	2	26.00	0.15	0.60	4.68			
	Cross Road 02	4	22.30	0.15	0.60	8.03			
	Cross Road 03	4	22.20	0.15	0.60	7.94			
	Cross Road 04	4	18.60	0.15	0.60	6.64			
	Connecting Road	4	34.50	0.15	0.60	12.42			
	St Michaels School Backside Rd	4	95.80	0.15	0.55	31.61			
	12th Cross Krishnadevaraya Rd	4	192.70	0.15	0.60	68.70			
	10th Crss Major Sandeep Rd	4	202.00	0.15	0.60	72.72			
	Cross Road	2	228.20	0.15	0.60	40.80			
	Cross road 2	2	49.00	0.15	0.60	8.82			
						840.69			
	Culverts Raft	14	4.80	1.20	0.23	18.55			
	Culverts Wall	28	4.80	0.23	0.55	17.00			
						35.55			
						876.24	**Cum**	**7420.09**	**6501801.00**
6	Providing and Fixing **pre cast covering Slab** made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	CC Drain Top Covering Slab								
	Kogilu Layout								
	Bande Road	1	663.40	0.90		597.06			
		1	384.90	0.90		346.41			
	9th Cross Road	2	95.65	0.90		172.17			
	Cross Road 01	1	26.00	0.75		19.50			
	Cross Road 02	2	22.25	0.75		33.38			
	Cross Road 03	2	22.15	0.75		33.23			
	Cross Road 04	2	18.60	0.75		27.90			
	Connecting Road	2	34.50	0.75		51.75			
	St Michaels School Backside Rd	2	95.75	0.75		143.63			
	12th Cross Krishnadevaraya Rd	2	192.70	0.90		346.86			
	10th Crss Major Sandeep Rd	2	190.30	0.90		342.54			
	Cross Road	1	228.20	0.75		171.15			
	Cross road 2	1	49.00	0.75		36.75			
						2322.32	**Sqm**	**2452.65**	**5695826.00**
7	Providing and Fixing pre cast **covering Slab 250mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge ,KPWD SR 2018-19								
	Culverts Top Slab	14	4.80	1.20		77.11			
	Missing Slab	1	1.50	1.20		5.51			
						82.62	**Sqm**		
		Upto 125%				**74.40**	**Sqm**	**5686.13**	**423048.00**
		Above 125%				**8.22**	**Sqm**	**5418.00**	**44,536.00**
8	Providing and fixing pre cast solid cement **concrete kerb stones** made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. (I No-5.30,P No-27,KPWD SR 2018-19)								

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	Kogilu Layout								
	1st Main Road	1	663.40			663.40			
		1	384.90			384.90			
						1048.30	**M**		
						2330.00	**Nos**	**453.88**	**1057540.00**
9	KSRRB 800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. (I No-24.1,P No-180,KPWD SR 2018-19)								
	Kogilu Layout								
	1st Main Road	1	663.40		0.35	232.19			
		1	384.90		0.35	134.72			
						366.91	**Sqm**	**89.00**	**32,655.00**
10	KSRRB M300-14. **Excavation for roadwork in all types of soil** by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 8km lead= (I No-19.14,P No-143,KPWD SR 2018-19)								
	Kogilu Layout								
	Bande Road	2	879.00	0.95	0.20	339.12			
	CC Road								
	9th Cross Road	1	108.50	3.50	0.30	113.93			
	Cross Road-01	1	24.90	3.00	0.30	22.41			
	Cross Road-02	1	26.30	3.10	0.30	24.46			
	Cross Road-03	1	25.30	3.30	0.30	25.05			
	Cross Road-04	1	18.50	2.75	0.30	15.26			
	Cross Road-05	1	34.80	3.00	0.30	31.32			
	St Michaels School Rd	1	174.30	3.95	0.30	206.55			
	Matru Layout								
	1st Cross	1	389.80	5.32	0.30	621.89			
	2nd Cross	1	198.50	5.20	0.30	309.66			
	3rd Cross	1	249.40	5.25	0.30	392.81			
						2102.44	**Cum**	**67.10**	**141074.00**
11	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147,KPWD SR 2018-19)								
	Matru Layout								
	1st Cross	1	389.80	5.32		2074.52			
	2nd Cross	1	198.50	5.20		1032.20			
	3rd Cross	1	249.40	5.25		1309.35			
						4416.07	**Sqm**	**6.68**	**29,499.00**
12	Construction of **granular sub-base Grading-V** as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications.(I No-20.5,P No-153,KPWD SR 2018-19)								
	Kogilu Layout								
	Bande Road Widening	2	879.00	0.95	0.15	254.34			
	Matru Layout								
	1st Cross	1	389.80	5.32	0.15	311.18			
	2nd Cross	1	198.50	5.20	0.15	154.83			

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	3rd Cross	1	249.40	5.25	0.15	196.40			
						916.75	**Cum**	**2093.64**	**1919341.00**
13	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18,KPWD SR 2018-19)								
	Kogilu Layout								
	Bande Road Widening	2	879.00	0.95	0.225	381.51			
	Matru Layout								
	1st Cross	1	389.80	5.32	0.225	466.77			
	2nd Cross	1	198.50	5.20	0.225	232.25			
	3rd Cross	1	249.40	5.25	0.225	294.60			
						1375.12	**Cum**	**2100.32**	**2888198.00**
14	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6,KPWD SR 2018-19)Issue rate Dated -01-07-2020								
	Kogilu Layout								
	Bande Road Widening	2	879.00	0.95		1695.59			
	Matru Layout								
	1st Cross	1	389.80	5.32		2074.52			
	2nd Cross	1	198.50	5.20		1032.20			
	3rd Cross	1	249.40	5.25		1309.35			
						6111.66	**Sqm**	**31.15**	**190378.00**
15	KSRRB 500-2. **Cleaning the existing black topped surface** with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications. (P.No-158,I No-21.12,KPWD SR 2018-19)								
	Total TC Area					9494.23			
	Total PC Area					6111.66			
	TC-PC					**3382.57**	**Sqm**	**5.56**	**18,807.00**
16	KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7,KPWD SR 2018-19)Issue rate Dated -01-07-2020								
	For DBM								
	Kogilu Layout								
	Bande Road Widening	1	879.00	5.78		5078.16			
	For BC								
	Kogilu Layout								
	Bande Road	1	879.00	5.78		5078.16			
	Matru Layout								
	1st Cross	1	389.80	5.32		2074.52			
	2nd Cross	1	198.50	5.20		1032.20			
	3rd Cross	1	249.40	5.25		1309.35			
						14572.39	**Sqm**	**13.35**	**194541.00**

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
17	KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6,KPWD SR 2018-19) Issue rate Dated -01-07-2020								
	For DBM								
	Kogilu Layout								
	Bande Road Widening	1	879.00	5.78	0.05	254.03			
	Matru Layout								
	1st Cross	1	389.80	5.32	0.05	103.73			
	2nd Cross	1	198.50	5.20	0.05	51.61			
	3rd Cross	1	249.40	5.25	0.05	65.47			
						474.83	**Cum**	**6724.80**	**3193166.00**
18	Providing and laying **bituminous concrete** 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. – do – using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) (P.No-171,I No-21.78.12,KPWD SR 2018-19) Issue rate Dated -01-07-2020								
	For BC								
	Kogilu Layout								
	Bande Road	1	879.00	5.78	0.04	203.22			
	Matru Layout								
	1st Cross	1	389.80	5.32	0.04	82.98			
	2nd Cross	1	198.50	5.20	0.04	41.22			
	3rd Cross	1	249.40	5.25	0.04	52.37			
						379.80	**Cum**	**7910.68**	**3004438.00**
19	KSRRB M600-1.Providing and **Constructing dry lean cement concrete** mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with fixed form paver. (P.No-174,I No-21.1.2,KPWD SR 2018-19)								
	CC Road								
	9th Cross Road	1	108.50	3.50	0.15	56.96			
	Cross Road-01	1	24.90	3.00	0.15	11.21			
	Cross Road-02	1	26.30	3.10	0.15	12.23			
	Cross Road-03	1	25.30	3.30	0.15	12.52			
	Cross Road-04	1	18.50	2.75	0.15	7.63			
	Cross Road-05	1	34.80	3.00	0.15	15.66			
	St Michaels School Rd	1	174.30	3.95	0.15	103.09			
						219.30	**Cum**	**4077.15**	**894126.00**

Sl No	Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
20	**Cement concrete pavement** Construction of un-reinforced plain cement concrete pavement, Thickness as per design, over a prepared sub base with 53 grade cement or any other type as per clause 1501.2.2 M30 (Grade) coarse and fine aggregate conforming to IS: 383 maximum size of coarse aggregate not exceeding 25mm , mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weight batcher as per approved mix design laid in approved fixed of 125 micron thick polythene film, wedges steel plates including levelling the form work as per drawing) Spreading the concrete with shovels rackers compacted using needle screed and plate vibrator and finished in a continuous operation including provision of contruction joints primer joint sealant curring of concrete slabs for 14 days and wateri finishing to lines and grade as per drawing and techincal specification clause 1501 with all lead lifts loading & unloading charges cost and conveyance of all materials(P.No-176,I No-22.6.1,KPWD SR 2018-19)								
	CC Road								
	9th Cross Road	1	108.50	3.50	0.15	56.96			
	Cross Road-01	1	24.90	3.00	0.15	11.21			
	Cross Road-02	1	26.30	3.10	0.15	12.23			
	Cross Road-03	1	25.30	3.30	0.15	12.52			
	Cross Road-04	1	18.50	2.75	0.15	7.63			
	Cross Road-05	1	34.80	3.00	0.15	15.66			
	St Michaels School Rd	1	174.30	3.95	0.15	103.09			
						219.30	**Cum**	**5468.84**	**1199326.00**
21	KSRRB M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15,KPWD SR 2018-19)								
	For BC								
	Kogilu Layout								
	Bande Road	2	879.00	0.10		175.80			
	Matru Layout								
	1st Cross	2	389.80	0.10		77.96			
	2nd Cross	2	198.50	0.10		39.70			
	3rd Cross	2	249.40	0.10		49.88			
						343.34	**Sqm**	**477.24**	**163856.00**
								Total Construction Cost	**35164964.00**
								Utility Shifting,Miscellaneous and Rounding off	**245.00**
								GRAND TOTAL	**35165209.00**

Assistant Engineer
Ward No-05
BBMP Bangalore

Asst. Executive Engineer,
Project Division Yelahanka
BBMP Bangalore

Executive Engineer,
Project Division Yelahanka
BBMP Bangalore

Technical Sanction
Accorded for Rs. 35165209.00
Head of A/C P3801
CER NO : 13 ..... Dt 26.05.2021

TR

CE (YLK)